THE VETERINARY RECORD

A Weekly Journal for the Profession.

EDITED BY WILLIAM HUNTING, F.R.C.V.S.

No. 79. SATURDAY, JANUARY 11, 1890. VOL. II.

EDITORIAL NOTES.

"There is no royal road to learning," and the man who thinks he can carry out any technical calling without a special training is—to put it negatively—not a wise man. In the practice of medicine this is specially true but, unfortunately, in no art is it less capable of demonstration to the average intellect. Men will persist in doctoring themselves even although at times they have some grave doubts as to the propriety of the proceeding. When it comes to doctoring a domestic animal very few doubts of their ability remain. The poor dumb brute can express no feeling induced in him by the remedies applied. They may do harm, they may do good, but results only are looked at. Recovery is interpreted as proof of the value of the remedies, death is considered as simply due to the natural intensity of the disease. If the animal body were a mechanical contrivance, out of order, we might allow the logical sequence of events—the machine would not go, we did certain things and it went, *ergo*—our interference re-established proper action. The animal body is however not a mere piece of mechanism. It possesses a power machines do not possess, *i.e.*, the power to rectify errors of function, and even to alter structural changes; in other words it possesses a strong intrinsic ability to overcome disease — a natural tendency to recovery which has been expressed as the *vix medicatrix naturæ*. It is this tendency that quacks and amateurs impose upon. They treat disease, and when the animal recovers in spite of them they innocently claim a cure. Amateur doctoring of animals might possibly, in these days of School Boards, fall into desuetude—some doubts of its utility might occur to the ordinary cultivated intelligence—but here our own profession steps in and assists in keeping up the delusion. The owner, say of a horse, is not quite satisfied that he is able to treat some disease; his ignorance, vanity and cupidity prevent him from employing a professional expert, so he writes to a penny paper, on the staff of which is a veterinary oracle able to diagnose all cases on symptoms detailed by a man who does not understand the significance of one of them, and next week appears cock-sure advice to assist him in the cure. With simple faith in the great press's omniscience he carries out the advice tendered, oblivious of the fact that it is probably given by a newly-fledged graduate intent only on earning an honest (?) penny. The result may or may not be fatal; it may be only detrimental and Nature may, even against fearful odds, obtain the victory. How many animals are killed, how many are only injured by the penny-a-week advice of "our veterinary column" will never be known. In some cases only trouble will be given to the owner who is weak enough to treat his sick animal, or to the druggist who tries to dispense the valuable prescriptions of our "Vet." We append a formula for *powders* which we fancy will cause some difficulty in compounding, but which will never give the writer thereof one uneasy moment, for the owner no doubt will expect medicine for a horse to be dirty and nasty.

Cough Powder.—Extract of belladonna, 3 drachms; carbonate of soda, 1½ oz.; powdered aniseed, 9 drachms; nitrate of potash, 1½ oz.; powdered fenugreek, 1½ oz. Mix and divide into eight powders, and give one twice daily.

In our correspondence column will be found a letter from Professor Walley correcting an error of ours as to his opinion on dishorning. We are only too glad to publish it as we now know that the great opponent of this practice is no enthusiast, but a practical man quite willing to recognise at least two methods of attaining an end many agriculturists think necessary to their business. "Tipping" and "buttoning" supply processes available either on old or young animals for the prevention of goring. Even when a practice is cruel it is some justification for it when its supporters can truly say—"there is no other way of attaining our object." This argument in favour of dishorning cannot now be employed. On calves "buttoning" may be practiced, whilst on mature oxen "tipping" is acknowledged as effective but not cruel.

Mr. Woodroffe Hill draws attention in a short note to the fact that next year is the Centenary of the Royal Veterinary College. He suggests that it should be commemorated by some conspicuous function likely to mark the progress and position attained by the profession. We have the greater pleasure in re-echoing these sentiments as not only will 1891 be the Centenary of the Veterinary College but of the Veterinary profession. Anterior to the founding of the College there was no veterinary profession in Britain. We date our origin *as a profession* from the establishment of the College and we should do well to celebrate our Centenary in some way which would mark the unity of the whole body. If the College authorities will allow practitioners to participate we feel certain a commemoration worthy of the occasion might be organised. What form it should take is a matter for future consideration, but time flies so swiftly that no delay should be permitted in making preparations.

ARTICLES AND CASES.

RABIES AND MUZZLING.

By Jno. A. W. Dollar.

With the new muzzling order comes the usual flock of letters on the uselessness and cruelty of the muzzle. I have for some weeks watched them, and wondered if anyone would trouble to reply. As no one has done so and as the subject seems to demand no extraordinary intellectual effort I devote an hour to putting on paper some points which have occurred to me.

Three articles have appeared; one on December 14th, the others on the 21st and 28th respectively. The first one (by Mr. Hollingham) is decidedly the most interesting. As looking for a needle in a bottle of hay exercises the eyes, so this, the mind, in search of abstract principles of truth. The subsequent articles by Messrs. Woodroffe Hill and W. Williamson are reflections of the first. The advice to the public to look to our profession (or is it to the writer) "for advice on 'doggie' matters" seems sound, and it is probable that the gentleman giving it has gone further in that direction than the medical colleagues whom he disavows.

Before proceeding to the discussion of the first paper it will be necessary to clear up what seems rather a hazy subject to many minds, I refer to the difference between the muzzle and the muzzling order. Though, in a previous paper, I devoted some attention to this point I will shortly reiterate what I then said, and at the same time consider what the proper attitude of the veterinary profession towards such point is. It seems to me that, in addition to many subordinate classes, the muzzling order should engage the attention of three chief ones; (1) Scientific experts to give precise information concerning rabies, (2) Legislators to consider how such information can best be applied to meet the exigencies of any given case, (3) Executive—to put in force the directions of the legislator.

Now, I take it that the position which we have *not* attained (though we aspire to it) is that of No. 1. It will now, perhaps, be seen that the attitude of hostility towards the muzzling order shown by some veterinary surgeons (from a professional standpoint) is illogical. We have nothing to do, as experts, with legislation—our energies should be strictly directed towards minding our own business. The cry, that as a profession, we should take up some definite line towards the order, will, if acted on, end in our "striking an attitude" and making ourselves ridiculous. As owners of dogs we may do as we please, but pray let us keep our profession out of the question. Strictly speaking, the efficiency or otherwise of the *muzzle* is not a *professional* question, it is a *legislative* matter, but, as I am about to bring it forward myself, I will not too strenuously insist on this point. Returning now to the paper of the 14th inst—In the first paragraph the author proposes to consider "the muzzle, *per se*" yet before reaching the bottom of the page we are introduced to the muzzling order—a distinctly different thing. Passing on, we are told that "any inconvenient argument directed against the position of certain authorities . . . if written for publication to our Fanciers' papers generally find their way into the W. P. B." It is no excuse for discussing professional matters in lay columns that gross examples of advertising may be found in high places, but apart from this issue, I would remark that no editor of a paper is so dead to his own advantage as to refuse any article couched in readable English if the subject be interesting and fairly well treated.

At a meeting of anti-muzzlers, Professor Horsley, who replied on behalf of muzzling, was the sole speaker present who represented the Rabies Prevention Society. The sneer at this gentleman and others, who "have no previous record of such importance as to warrant them in assuming to direct public opinion on the subject of rabies" shows the extent of the acquaintance the writer possesses with the authorities on the subject with which he professes to deal. Were it not that any defence of Prof. Horsley by me would appear an impertinence, and that really none whatever is needed, I might very easily dispose of this criticism, but, beyond noting the high honour done him by the Government in connection with the Rabies Commission, I shall say nothing. He alone replied to all opponents, bringing such overwhelming facts to controvert the statements made against muzzling that whatever the constitution of the meeting no logical man—and amongst these I do not include the propagators and supporters of such theories as the spontaneous origin of rabies, the production of rabies by a broken leg, and the non-efficiency of muzzles being due to their not preventing the dog wearing them from being bitten (I would suggest to the gentleman proposing this latter that all dogs should wear a coat of chain armour)—could conscientiously have weighed the evidence advanced on either side without coming to the conclusion that muzzling was right in principle and had in the past effected a most unquestionable diminution in rabies wherever properly applied.

"As I before remarked rabies is essentially a veterinary subject and unless we as a profession are simply to play 'follow the leader' it is high time to bestir ourselves, and by means of our various medical associations and journals to take up some clearly defined attitude in regard to the muzzling bill shortly to be introduced before Parliament." Really it would seem that some members of our profession "want the earth" and perhaps there would be less objection to gratifying their moderate desires if there were the remotest probability of their being able to do anything with it when they got it. We have been told that all sorts of things were "essentially veterinary subjects," and when the demand has been granted we have had extensive opportunities for judging how unwise a thing it is to allow children to play with edged tools. It would seem that the writer of the article has (however inadvertently) been playing "follow the leader" not only in making this claim but also in depreciating the work of members of another profession who

possess more knowledgs than himself or his *confrères*.

Is it likely that we shall ever obtain the regard of what some are fond of dubbing "the sister profession" if any ill advised persons are permitted to asperse those who throw light on subjects they themselves are incapable of illuminating. We all want to cultivate the gift of learning, and in order to do so let us try, if only a little, to understand that we do not know everything. The last quoted paragraph clearly carries its own contradiction. The fact that "a muzzling bill is about to be introduced into Parliament" argues that danger to human beings is apprehended. The dog must be protected from himself, but infinitely more must man be protected from the dog. If it be said that rabies owes its importance (to us) to the fact that the dog acts as the habitat, we might as well insist on wool sorters' disease, ringworm, trichiniasis, and a host of others being "essentially veterinary subjects."

Then we come to three questions—1. Is the muzzle in itself a preventive of rabies? Writing some time ago on the muzzling order I pointed out that although the muzzle is theoretically a perfect preventive of rabies, yet as it can never be applied universally it requires in practice to be supplemented by other devices, and that possibly it does not act as at first seems apparent viz., by preventing rabid dogs biting, but owes its value to other less appreciated causes. All these causes, however, centre round the muzzle and owe their existence to it, so that it is not at present possible to substitute another equally effective object for it, and the very objections made to its use involuntarily assist in securing its efficiency.

The second question "If the muzzle does preveut rabies why are something like 200,000 dogs to be exempted from wearing it?" comes from a totally different direction to the first and is not, I submit, a question for a *professional* specialist at all. It deals with a matter partly of practice and partly of policy, and is one for those who have to translate purely ideal conceptions into the language of everyday life, it has nothing to do with either the medical or veterinary professions as such, whose attention should be confined to formulating the most desirable conditions, leaving others to put them into practice. To the third question I conceive the answer to be that for dogs coming from abroad either a quarantine must be enforced, or else it must be made compulsory, under heavy penalties, for the dog to wear a muzzle during the time of his passing through this country, or for the first period of his stay here, and the owner be required to enter into recognisances to carry out some special regulations.

AWFUL WARNINGS,

By M.V.S.H.

We learn more from our failures than from our successes—at any rate that is my condition, and as it may be that of others, I offer the following cases for the perusal of your readers. To the younger members who care to learn from the errors of others they may be profitable. To the older members who have little to learn they may be interesting, for it is too true that most of us derive a certain amount of satisfaction from the misfortunes of our friends.

Case I. On one of my daily visits to a large stud which was entrusted to my professional care, three cases of lameness were shown me which had occurred since my last visit. They were brought out into the yard for examination and diagnosis. One—I forget its nature—was soon disposed of. No. 2 was lame off fore. "Trot on" was the order. The action was very distinctive—difficulty in raising and advancing the limb, circular outward movement of the foot. Diagnosis—shoulder lameness!! Order, "Foment the shoulder." No. 3 now appeared and was trotted up. The action was to my eye identical with that of No. 2, and diagnosis was expressed to the foreman in the words "What, another shoulder ease, we are having too many of these; foment the shoulder until I see him again." I was struck with the coincidence of two such comparatively rare cases in one day, and not a little proud of the quick powers of observation which experience had given me, and which enabled me to diagnose both at sight. Next day's visit disclosed nothing remarkable—both horses were casually looked at in their stalls. Next day no visit was paid. On the third day, after carefully looking through a row of loose boxes containing mostly chest affections, I turned to the foreman and said "Now let us have out all the lame horses. How are those two shoulder cases? He replied "One is about the same, but the other is much better now it has broken out at the coronet."

Moral.—Even when you are certain the lameness is in the shoulder—have the shoe off.

Case II.—I examined a pair of ponies, and passed them sound. I noticed on the off hock of the smaller animal a mark like that left by a budding iron—right on the seat of spavin. I remarked to the coachman that I failed to see why the hock had been touched as there was no trace of spavin, and I mentally decided to protect myself by mentioning the mark in my certificate. I forgot all about it. Three days afterwards I was sent for in a hurry as the smaller pony was lame behind. I had him out and was horrified to find it was the marked leg. I concluded I had made a mistake and that the budding iron had not been used for nothing. I tried to gain time and avoid responsibility by saying I thought it was nothing serious—probably a sprain due to slipping about in the big loose box. I advised a cold water bandage on the hock and a few days rest in a stall. The owner was very wrath and sent the pony to another V.S., for examination, who diagnosed spavin, and prescribed firing and three months rest. Owner in despair sent for seller to see if he could arrange a return. Seller had gone away leaving no address, and suspicion was fully aroused. Being a sensible man, my client thought that before adopting the firing he might as well try the bandage and rest. He did so, with result that the pony was sound in three days and went to work. Again I was proud of my skill, and thought how much more clever a man I was than my neighbour. Quite a year elapsed

and I told a friend about my case in the presence of my foreman farrier. When the friend went away the foreman entered my office and thus he said "Governor, I ought to have told you long ago about that pony, and now that Joe has left (Joe was a farrier) I must do so. The fact is we shod that pony the day before he was lame and Joe got a nail a bit near; he told me he had done so, and we left the nail out. It was'nt much, and I knew it would soon be all right." My wounded feelings provoked me to reply warmly but the rest of that interview is best left untold.

Moral.—Anybody can be too cock-sure.

Case III.—My assistant came to me one night to report that a case he had just been to see was beyond his power to diagnosis, and he desired my superior judgment. We went together and found an aged bay cab horse, in good condition, which had been brought home visibly very ill and sweating profusely. It stood with the head almost pendulous, sweating freely, respiration slightly accelerated, no other signs of pain, legs and ears cold, pulse 92, very weak and very irregular. The heart's action was very weak and irregular but the muscles trembled so that the sounds were badly marked.

The disproportion of the pulse to all other symptoms, the irregular heart's action, the certainty that it was not a lung case nor a bowel case, led me to diagnose heart disease. Raising the head caused the animal to reel so I gave no medicine, said it was a hopeless case and would be dead in the morning. On the way home I gave the assistant a clinical lecture on diagnosis generally and heart disease in particular, finishing by telling him we would make a post mortem together. The horse did not die in the morning but lived on till the next day without alteration of any marked kind. We went to the post mortem and found the heart healthy but the liver ruptured.

Moral.—Always examine the visible mucous membranes, and dont lecture your assistant until after the autopsy.

P.S. For evident reasons, Mr. Editor, I ask your permission to use only initials.

PASTEUR ON RABIES.

Two recent numbers of *The New Review* contain an article by Pasteur on Rabies written popularly but containing some facts which it is interesting to have from the savant's own hand. He says—

It is not so easy as one might think at first to successfully inoculate a series of animals with rabies. We have formerly called attention to the fact that, if dogs be bitten by rabid animals, the disease does not appear in all of them. A direct subcutaneous inoculation of the saliva of a rabid dog is hardly more successful. The saliva contains, together with the microbe of hydrophobia, other microbes of various kinds which may give rise to abscesses and other morbid complications and thus prevent the occurence of rabies. In short, only a few years ago, experimenters would not have known where to find the virus in a pure state, nor how to use it in such a way as to produce rabies and nothing but rabies. Luckily, these two difficulties were overcome at the same time by the following discovery. If the autopsy of an animal dead of rabies be made, and if a small portion of the brain, spinal cord, or, better perhaps, of the thicker part of the cord which unites this to the brain—a part which is called *medulla oblongata* or *bulbus*—be taken, and if this portion of the central nervous system be crushed in a sterilized fluid, with all necessary antiseptic precautions, and if a small quantity of this fluid be now introduced on the surface of the brain of a chloroformed animal (dog, rabbit, or guinea pig) by means of a hypodermic needle, after trephining, the animal thus inoculated will contract rabies to a certainty, and that in a relatively short time; that is, in a period not exceeding fifteen days or three weeks.

Every virus, or rather all virulent and infectious microbes, may be attenuated by natural or artificial means.

The virus of rabies may be attenuated to any desirable degree by the action of air and moderate heat, and may then, when inoculated into animals, enable them to resist the action of the primitive fatal virus. In other words, one may produce in a dog a state in which it is impossible for that animal to contract rabies. Take a dozen dogs, vaccinate them, and then inoculate them at the surface of the brain with the pure virus of rabies. Then perform the latter operation, at the same time, on twelve other non-vaccinated animals. Not one of the first dozen will contract the disease, but the twelve other animals will all die of it after exhibiting all the various symptoms typical of rabies, resembling in every particular those produced by the bite of a rabid animal wandering about the streets. The experiments which I have just mentioned, showing that dogs may be vaccinated against rabies, may be successfully repeated on other dogs, even if they have been bitten by rabid animals before the inoculations are begun, provided too long a period has not elapsed between the time of the bite and that of the protective inoculations. The success of such a course of treatment depends on the usually long period of time intervening between the day of the bite and the period at which the first symptoms of rabies show themselves. The immunity due to vaccination is produced in animals before the period at which the acute symptoms of rabies ought to appear. This is indirectly but fully proved by the fact that, if the period of incubation in a dog be much shortened, our method may not prove successful in vaccinating that animal. If the virus be, for instance, inoculated at the surface of the brain, the disease often follows as early as two weeks after the inoculation. It is noticeable that, in order to protect an animal efficiently under these conditions, the whole process of preventive inoculations must be carried on as quickly as possible, if that animal is to be efficiently vaccinated before the fatal symptoms of rabies appear.

Vaccinated dogs have been inoculated on different

occasions with several cubic centimètres of virus taken from the *medulla oblongata* of dogs dead of rabies, without noticeable evil effects, although such inoculations were effected not only once but every day during several months. Vaccinated dogs during the year succeeding this operation are not injuriously affected by the bites of rabid animals.

Some years ago I brought together at Villeneuve l'Etang many dogs vaccinated during the year 1884, and placed them in a large kennel. After having demonstrated the fact that in 1885 and 1886 the larger number of these animals, though not all (eleven out of fourteen in 1885, four out of six in 1886), had not suffered any harm from the inoculation of the *rage des rues* (street rabies) even when the virus was deposited on the surface of the brain, I came to the conclusion that, after all, it was only necessary to know whether such vaccinated animals would be able to resist the action of the virus when introduced by a bite. Accordingly, in 1887, 1888, and 1889, vaccinated animals were merely bitten by dogs suffering from rabies, and not inoculated under the skull. In 1887, the vaccinated dogs suffered no evil effects after being inoculated by the bite of a rabid dog. In the month of July, 1888, five dogs vaccinated in the year 1884 were bitten, together with five non-vaccinated animals. The five vaccinated animals are now (August, 1889) still in perfect health, whereas, of the five others, three died of rabies and two are living now. At the time of writing a similar experiment is in progress on another group of animals vaccinated in 1884.

The Doctor then goes on to relate how he first was induced to experiment on the human being and quotes some interesting cases. From the concluding part of the Article we take the two following facts:—

During the last four years the average number of people who come to the Pasteur Institute in order to undergo the preventive treatment (after having been bitten by rabid dogs) amounts to 150 per month.

Dr. Dujardin-Beaumetz, at the request of the Prefect of Police, made careful inquiries as to the number of persons bitten in the Department of the Seine during the year 1887. In his official report, printed in 1888, he states 3·06 of the people so bitten were vaccinated at the Pasteur Institute, and that *three* of them died of rabies, whereas of the 44 persons who were not inoculated 7 died of rabies. The mortality in the first case is 0·97 per cent., and 15·90 per cent. in the second.

GOVERNMENT VETY. DEPARTMENT.

CONTAGIOUS DISEASES IN ANIMALS.

Reported in Great Britain and Ireland during the week ended December 28th, 1889.

Pleuro-pneumonia.—In Great Britain 5 outbreaks of this disease were reported during the week, 1 in England, in the county of Cumberland, and 4 in Scotland, in the counties of Aberdeen, Forfar, Lanark, and Stirling. There were 16 cattle attacked and 13 healthy cattle in contact were slaughtered. In Ireland 2 fresh outbreaks occurred in the North and South Dublin Unions and 3 cattle were attacked, but no healthy animals in contact were slaughtered.

Anthrax.—Of this disease 6 fresh outbreaks were reported in Great Britain during the week, 5 of them in England, in the counties of Kent, Norfolk, Northampton, Notts, and Stafford; the outbreak in Scotland was in Kirkudbrightshire. The number of animals attacked was 9; of the diseased animals 1 was killed, 10 died, and 1 remained alive at the end of the week. No case of anthrax occurred in Ireland during the week.

Swine-Fever.—In Great Britain 60 fresh outbreaks of this disease were reported, 56 in England and 4 in Scotland; 386 pigs were attacked, 228 diseased pigs were killed, 131 died, 29 recovered, and 261 were still alive at the end of the week. In Ireland 5 outbreaks of swine-fever occurred during the week and 6 swine were attacked.

Glanders and Farcy.—In England 5 fresh outbreaks of glanders were reported, 1 in Herts, 3 in London, and 1 in Surrey; 10 horses were attacked 1 in Essex, 1 in Herts, 6 in London, 1 in Surrey, and 1 in Lanarkshire. There were 6 fresh outbreaks of farcy reported in England, 1 in Herts, 4 in London, and 1 in Surrey; 9 horses were attacked, 1 in Herts, 7 in London, and 1 in Surrey. No case of either glanders or farcy occurred in Ireland during the week.

Rabies.—In England 4 cases of this disease were reported in the week, 1 in Hants, 1 in London, 1 in Middlesex, and 1 in York (W.R.). In Ireland there were 5 cases of rabies during the week, 2 in dogs, 2 in cattle, and 1 in a pig.

REVIEW.

THE PRACTICE OF EQUINE MEDICINE.

All who knew the late Professor Robertson would naturally expect a work by him on the Practice of Equine Medicine to be at least sound, thoughtful, and learned. The second edition, which has recently appeared, was prevented by his untimely death from obtaining the author's revision, but that duty has been performed by Professor Penberthy, who tells us in his short preface that "extensive alteration" was difficult and possibly undesirable. We are unfortunately not acquainted with the original edition and therefore cannot say to what extent revision has been carried. The late Professor's style was marked by a strong individuality, and failing to notice much literary diversity in the pages we conclude the editor has not added much to the work.

In the original preface we are told that the object of the author was to exhibit in a concise form a detailed account of the principal diseases to which the horse was liable; that it was written chiefly for his students; and that he had not touched upon that part of the study of medicine recognized as the

theory or science. He has most admirably attained his object, and the student will find in his pages descriptions of disease, explanations of their causes and nature, with suggestions for treatment not surpassed by any English veterinary author. Professor Robertson was not a writer who can be read in a hurry. Some of his sentences seem heavy and involved but this is not due to any want of clearness in his ideas or lucidity in their expression. It is due to his cautiousness and to his conviction that positive statements are dangerous in the present condition of medical science. He qualifies his statements constantly, and seems always on his guard against dogmatism.

To the student commencing his studies this will perhaps seem at first somewhat confusing. Nearly all young men like their information supplied in nicely rounded sentences which save them the trouble of thinking. They resent having a question discussed thoroughly and sometimes left incomplete so far as the views of the author are concerned. Some practitioners too, we fear, resent the worry of having to think for themselves and rather prefer to have the subject dogmatically defined for them, even though the definition happen to be erroneous. The superficial reader will often find Professor Robertson inconclusive; the scientific reader by the exercise of a little patience will find him remarkably correct in his deductions, always willing to honestly weigh contradictory observations and theories, and never misled by false pride into refusing to confess his ignorance. Valuable as the work is for good students, we believe it will be even more appreciated by the practitioner who has had practical experience, and who has not forgotten his scientific teaching.

The treatment of the subject is essentially practical; it may be described as *Clinical* in contra-distinction to *Pathological*. We have no minute descriptions "of the varied products and changed elemental structures which are met with as the special results of disease" but we find each disease thoroughly studied as to "the phenomena which they exhibit, their causation, modes of development, termination, and the textural changes which are the results of their existence."

The plan of the book is laid out in three sections. The first two direct attention to the objects which should engage the energies of the practitioner, and the methods by which he may gather information. Then we have chapters on Ætiology, Semiology, Nosology, and a short but full one on contagion and infection. The third section treats in its first division of the General and Constitutional diseases, and in its second division of those which are regarded as local.

Section III commences with Simple Fever, and we have no hesitation in saying that this is the best account of that condition in English veterinary literature. The two longest chapters in this section are devoted to Anthrax and Glanders. Both are ably handled, and though we may not always accept the author's conclusions, we never feel so positive of our own after reading his statement of the other side. Speaking of Glanders he says, "We are satisfied of the microbic origin" and then rather puzzles us by the remark that "The evidence collected tends to confirm the belief in the volatility of the poison."

Influenza, Strangles, Rabies, Tuberculosis, and other diseases are treated of, as are two Indian diseases, Surra and Bursatti. A short chapter is devoted to Scarlatina in the horse—surely a rare disease and certainly badly named. The chapter on Tuberculosis is scant, and Scrofula is defined not as a form of tuberculosis, but as "the indwelling predisposition which precedes the development of tubercle."

Azoturia and Tetanus are placed in the section on *Local* disease which is surely an error, as the author tells us that the latter affection is due to "some morbific agent which finds its way through the blood to the spinal centres." Hæmoglobinuria—the name by which he prefers to describe what is generally recognised as Azoturia—is thoroughly discussed, and two experiments are mentioned which will be new to many readers. Two or three pints of the coffee-coloured urine from a patient were administered to two horses—"In each case a comatose condition was induced, with inability to rise for three days. Although the experience is too limited, it certainly suggests the inference that the noxious material is in the urine."

On Colic the author is remarkably clear and expresses the opinion, with which we quite agree, that the common notion that unrelieved cases are a fruitful source of enteric inflammation is open to doubt. The causes he finds in dietetic errors, obstructions from concretions, and parasites. The treatment advised is that suggested by Mr. Gamgee, Senr. about thirty years ago—aloes and enemata. To this Professor Robertson adds some agent to allay pain—as Morphia As an example of how treatment of disease alters it is curious to look back to the time when Mr. Gamgee was urging with a zeal amounting to enthusiasm the rationale of his treatment. Then everyone laughed, and employed opium; now hardly any practitioner hesitates to give aloes at once.

Space forbids us to notice all the chapters in this book, with most of which we are in complete agreement, but there are one or two items we cannot pass over. Shivering is described as a common manifestation of Chorea! Sulphate of Iron is mentioned as a remedial agent in the convalescent stages of Bronchitis. Blood-letting is recommended for Pulmonary Congestion—not however to relieve the lungs, but because "we may be able to relieve for a time the over-charged heart." There is something to be said for this remedy, especially under the circumstances referred to by the author "where we are by situation or other conditions precluded from employing any other remedies."

Perhaps the least satisfactory section of the book is that on Skin Diseases. The classification adopted is that first suggested by Hebra, and may be called the Pathological one. When we know a great deal more about the pathology of these diseases we may be able to classify them on this plan. As yet it is premature, and it is inconvenient. Under the head of Ecthyma we find a description of American Skin Disease, Canadian Ringworm or Sycosis as it has been called by different observers. The cause is

said to be such agencies as "tend to debilitate or depress vital action" and its frequency in imported horses is credited to "unavoidable disturbance during transit." The facts are that it is a contagious disease due to a fungus. The treatment recommended includes the application of "woollen cloths wrung out from warm water"—absolutely the very worst thing that could be done.

The errors, however, are few and far between. The book should be studied by every student of veterinary medicine, and no practitioner does himself or his client full justice who has it not in his library for reference

The paper is good, the type excellent, and the general get up all that may be expected from such a leading firm as Baillière Tindall & Cox.

EXTRACTS.

FOOD RATIONS.

By Professor Wrightson.

Much attention is at the present time being given to the subject of scientific food rations, and no one can object to a rational system of feeding animals. If, by the aid of chemistry, a scientific system of feeding could be devised, stock farmers would be truly thankful.

The difficulties in applying albuminoid ratios appear to be:—

1. The differences in market value and their fluctuations. Thus, when beans are 40s. per quarter and linseed cake £9 per ton, we may come to a conclusion as to their relative values from their composition. But if beans should happen to come down to 30s., and linseed cake to £8, our calculations would be thrown out.

2. There is too much disposition to accept tables as correctly giving albuminod ratios. Thus we find the following ratios published:—

Linseed cake	1 : 2·2
Cotton cake (rough)	1 : 1·6
Cotton cake (decorticated) ..	1 : 1·5
Maize	1 : 8·3
Beans	1 : 2·1
Clover hay	1 : 5·0
Meadow hay	1 : 6·0
Wheat straw	1 : 41·1
Turnips	1 : 5·1
do.	1 : 12·4

Such results have no doubt been obtained, but where is the guarantee that linseed cake and cotton cake will always preserve the ratios given? Take hay as another example. So much depends upon its quality, that no standard can possibly be fixed.

3. Too little allowance is made for the great differences in the quality of produce from different descriptions of land. I will take grass as an example. The herbage of one field will fatten a bullock, while that from another will only grow a stirk. One field will yield a milk calculated for producing rich cheese, while another will yield a poorer milk and poorer products. Or, if we take turnips, one field will produce turnips which will fatten a sheep, while another will not produce roots of anything like this quality, so that evidently the feeding properties of turnips cannot be gauged by standard analyses. It is remarkable that, while according to Dr. Wolfe's tables the albuminoid ratio of turnips is given as 1 : 5·1, Mr. David Wilson gives it as 1 : 12·4. The difference is not reassuring.

4. The varying powers of assimilation of different animals are undoubted, and not sufficiently taken into account. While this is the case we cannot accept a simple albuminoid ratio as a satisfactory way of settling a question as to diet One kind of animal may be well adapted for a diet of hay and corn, as, for example, the horse. Another may be better adapted for a diet of grass, or of turnips and straw, like the ox. A third may be suited for meal, like the pig. How, then, can we arrange dietaries on an albuminoid ratio principle alone, when the question is complicated by such considerations as these?

The albuminoid and carbonaceous, or what are called the flesh-forming and fat-forming, constituents, are wonderfully blended in most stock foods, and in the dietaries in daily use upon the farm. Can we improve upon these dietaries? There is no doubt that skill is needed in mixing foods, and the knowledge that certain foods, such as linseed cakes, contain an excess of albuminoids, while straw contains an excess of amyloids, should prompt us to give cake with straw. Again, clover hay contains an excess of albuminoid, and should be fed with straw and with turnips, and clover hay and linseed-cake might be too heating a diet for sheep or cattle, if used too freely. Young animals require a higher proportion of albuminoids than mature cattle intended for fatting. Thus bean meal would be suitable for calves, and barley-meal for fatting bullocks.

These are very important facts upon which a study of albuminoid ratios certainly throws light, and therefore we think that a study of rations is important to stock feeders. We also conclude, generally, that a study of foods will enable us to improve our dietaries, and will also prevent us from falling into errors.

Calculation of Albuminoid Ratios.

The albuminoid ratio is the proportion between the albuminoid and the digestible carbohydrates in a food. In wheat there are 5·6 parts of soluble carboyhdrates to 1 of albuminoids, and we say the albuminoid ratio is as 1 : 5·6.

In adding fat or oil to the remaining carbohydrates it is usual to multiply the percentage by 2 4 or 2 5.

The albuminoid ratios in food for different classes of animals has been thus given:—

GROWING CATTLE.

Age in months.	Live weight. lb.	Ratio of Albuminoids to Carbo-hydrates.
2 — 3 ..	150	1 : 4·7
3 — 6 ..	300	1 : 5·0
6 — 12 ..	500	1 : 6·0
12 — 18 ..	700	1 : 7·0
18 — 24 ..	850	1 : 8·0

GROWING SHEEP.

5 — 6	.. 56	.. ..	1 : 5·5
6 — 8	.. 67	.. ..	1 : 5·5
8 — 11	.. 75	.. ..	1 : 6·0
11 — 15	.. 82	.. ..	1 : 7·0
— 20	.. 85	.. ..	1 : 8·0

GROWING SWINE.

2 — 3	.. 50	.. ..	1 : 4·0
3 — 5	.. 100	.. ..	1 : 5·0
5 — 6	.. 125	.. ..	1 : 5·5
6 — 8	.. 170	.. ..	1 : 6·0
8 — 12	.. 250	.. ..	1 : 6·5

In the case of fattening animals the proportions of the albuminoids to digestible carbo-hydrates is slightly different:—

For Oxen fattening	1st period	.. ..	1 : 6·5
,, ,, ,,	2nd ,,	.. ..	1 : 5·5
,, ,, ,,	3rd ,,	.. ..	1 : 6·0
,, Sheep ,,	1st ,,	.. ..	1 : 5·5
,, ,, ,,	2nd ,,	.. ..	1 : 4·5
,, Swine ,,	1st ,,	.. ..	1 : 5·5
,, ,, ,,	2nd ,,	.. ..	1 : 6·0
,, ,, ,,	3rd ,,	.. ..	1 : 6·5

The question arises whether these closely-approximating figures can be adjusted nearer than in the rations which are usually employed in practice.

I will as an example take just such a dietary as a good farmer would compose for a fatting bullock:—

4 lb. of linseed cake.
6 lb. of barley meal.
56 lb. of mangel.
10 lb. of wheat straw chaff.
6 lb. of meadow hay (long).

This has been written down irrespective of any idea of an albuminoid ratio, but more as an ordinary dietary. We will now ascertain the ratios by calculation, and see how the food comes out:—

	Albuminoids.	Carbohydrates.
4 lb. of linseed cake—		
10 per cent. fat by 2·5 = 25 by 4 =	.. —	.. 100·0
29 ,, carbohydrates by 4 =	.. —	.. 116·0
28 ,, albuminoids by 4 =	.. 112	.. —
6 lb. of barley meal—		
2·5 per cent. fat by 2·5 = 6·25 by 6	.. —	.. 38·5
57·5 ,, carbohydrates by 6	.. —	.. 345·0
10·0 ,, albuminoids by 6	.. 60	.. —
56 lb. of mangels—		
0·1 per cent. fat by 2·5 = 0·25 by 56	.. —	.. 14·0
9·1 ,, carbohydrates by 56	.. —	.. 499·6
1·1 ,, albuminoids by 56	.. 61·6	.. —
10 lb. of wheat straw—		
1·5 per cent. fat by 2·5 = 3·75 by 10	.. —	.. 37·5
31·9 ,, carbohydrates by 10	.. —	.. 319·0
3·0 ,, albuminoids by 10	.. 30·0	.. —
6 lb. meadow hay (good)—		
2·2 per cent. fat by 2·5 = 5·5 by 6	.. —	.. 33·0
42·1 ,, carbohydrates by 6	.. —	.. 252·6
11·7 ,, albuminoids by 6	.. 70·2	.. —
Ratio 1 : 5·3	333·8	1,775·2

The conclusion which cannot be avoided is that in this dietary, which, be it once more observed, was not constructed with a view to forming an albuminoid ratio, but only as an illustration of ordinary practice, the ratio is as nearly correct as possible.

While, therefore, there can be little doubt that the albuminoid ratio ought to be maintained, it appears evident that, as in many other cases, the best methods adopted by practical farmers agree fairly well with the suggestions made by purely scientific men.—*Live Stock Journal.*

ADULTERATION.

The following table shows the number of samples examined during the year, and the per centage of cases in which adulteration was reported:—

Articles.	No. of Samples. Examined.	Adulterated.	Percentage Adulterated. 1887.	1888.
Milk	10,859	1,292	14·9	11·9
Bread	689	4	1·9	0·6
Flour	429	2	—	0·5
Butter	3,499	363	17·5	10·4
Coffee	1,172	141	13·3	12·0
Sugar	144	—	—	—
Mustard	793	75	10·7	9·5
Confectionery & Jam	295	7	6·6	2·4
Pepper	1,315	101	11·0	7·7
Tea	461	—	0·2	—
Lard	1.782	299	5·9	16·8
Wine	45	2	6·3	4·4
Beer	399	11	2·2	2·7
Spirits	2,323	415	18·1	17·9
Drugs	383	28	10·9	7·3
Other Articles	1,756	96	9·7	5·5
Totals	26,344	2,836	12·8	10·8

This is the smallest percentage recorded since the results were first tabulated, and as the improvement has been progressive no doubt it will be maintained.

Milk continues to be the chief subject of analysis, but the Board of Trade is not certain whether the reduction in the adulterated samples last year is due to the hesitation of the analysts to condemn any but very bad samples, or to the greater expertness of the vendors in evading the Acts, or whether the public are really served with a much larger proportion of genuine milk. It is satisfactory to find that the adulteration of bread and flour is practically nil, their cheapness no doubt making it scarcely worth while to tamper with them. The sale of margarine as butter has received a substantial check by the operation of the Margarine Act, 1887. In one case in Essex where margarine was sold as butter with special circumstances of fraud, the vendor was sentenced to six months' hard labour. The adulteration of coffee still flourishes, though to a less extent. Where it is discovered the proportion of chicory is enormous, amounting sometimes to 80 and even 90 per cent.; so that the mixture might be described most accurately as "chicory slightly flavoured with coffee." As chicory can be bought at about 2d. a pound, the advantage to the vendor is obvious. Sugar, which was commonly adulterated in the days of high duties and prices, is now pure. Pepper is improving. One adulterant employed is ginger-fibre, after its active properties have been extracted by ginger-beer manufactories, so that in the words of a public analyst, "it is about as useful as so much sawdust." Besides water, cotton-seed oil has come into common use as an adulterant of lard, and some samples have been found to consist almost entirely of a mixture of this oil and beef fat. In the case of spirits, which continues to be tampered with largely, water is practically the only adulterant, the old practice of attempting to conceal the dilution by the addition of chemicals seeming to be no longer in vogue. In one case, however, a spurious whisky was found to be composed of coarse spirit and water, with so un-

pleasant a drug as guaiacum to flavour it. German yeast is often adulterated with starch. Aerated waters were found in some instances to contain traces of lead, due to carelessness of manufacture. On the report that cheese was being sold in Cheshire which was made of tallow grease and cotton-seed oil, a large number of samples were obtained, but they were found to be genuine. The analysis of tea by the Customs in bond appears to work satisfactorily.

SURGERY AS SHE IS REPORTED.

A Vienna correspondent of *The Standard* is responsible for the following:—

I am indebted to Dr. Henrich Weiss, a general practitioner in Vienna, for the following description of the recent experiments in the Military Veterinary Institute of Vienna, where the new method of examining certain diseases of horses discovered by Professor Polansky, of that institute, and his assistant, Dr. Skindelka, was demonstrated to an audience of laryngologists, veterinary surgeons, and general practitioners.

The first horse experimented upon was a strong brown Wallachian one. He was taken into a corner, thrown down, and held by six men, so that the nose lay horizontally. A second and smaller horse was subjected to the same treatment. Neither of them offered much resistance to the introduction of the endoscope, or the rhino-laryngoscope, and no opposition was made after the instruments were introduced, although the inspection by those present lasted in each case nearly ten minutes.

The principle instrument used, made by Leiter, namely, the rhino-laryngoscope, consists of a telescopic tube fifty-seven centimetres long, with a round magnifying glass at one end of the inner tube and an optical apparatus at the other end, with an incandescent light several centimetres below it, inside the tube. The apparatus is provided with a cooling arrangement, allowing cold water to circulate round the glass drop with the incandescent light, and the electricity is provided by a Leiter battery. The endoscope has the same arrangement, the long telescopic tube being the chief part.

All the instruments for the use of animals hitherto known—for instance, the lamp of Priestley-Smith, the electric lamp of Bayar, and many others—could at best show only the nearest part of the horse's nostril; and no instrument could be introduced to the back part of the nose, still less through the nose to the jaws. The œsophagus of a horse is too narrow to allow the introduction of the ordinary laryngeal mirror, and it was an ingenious idea of Dr. Schindelka to try its introduction through the nostril, for which, of course, the existing instruments had to be adapted, principally by lengthening the tube.

Dr. Nitze, of Leipsic, may be said to have been the first to introduce an instrument, constructed on the principle of Czermak's and Turk's laryngeal mirror, into small openings of the human body; and the principle of his cystoscope was adopted by Professor Mikulic, formerly of Vienna, now of Mecklenburg, for the construction of a mirror to inspect parts of the stomach. But this instrument offered so many difficulties that it was soon abandoned; whilst the new apparatus constructed by Leiter for Doctors Polansky and Schindelka promises to be suitable for introduction into the rectum, and also into the bladder, of horses and animals. The experiments in this respect are not yet finished.

Examination was made on this occason, through the eye-piece of the tube, of a case of paralysis of the *nervus recurrens*, an irregularity in the *tuba Eustachii*, and finally, after the tube had been withdrawn to the nose, a case of *echymosis*. The tube with the magnifying glass at its end rested on the spot to be inspected till everyone had clearly seen what was of interest. In the smaller horse was seen an affection of the vocal cords and the characteristic ganglia of nasal mucus in the larynx as well as in the nose. It is obvious that the diagnosis, especially of this latter terrible disease, is enormously assisted by the application of the new method. Those present were told that a case of nasal mucus, which could have been detected *in vivi* by no other means, was discovered by the rhino-laryngoscope, and afterwards corroborated by the *post-mortem* examination.

DR. BROWN-SEQUARD'S "ELIXIR OF LIFE."

The remarkable "discovery" made by Brown-Séquard some months ago was not repeated in this country. Almost all that was said about it amounted to an expression of regret that a man who had done such good work in his younger days should have drifted into such an error. In America he found imitators—some probably in earnest and some no doubt from motives of cupidity. In last week's *Lancet* the New York correspondent tells us the results of these "scientific" experiments:—

"The announcement that this distinguished physiologist had discovered a method of renewing the vigour of youth in the aged was received in this country with an incredulous smile by the profession. But there is always a class of medical men who are ready at once to test the value of any new remedy, and during the past month the newspapers have been filled with experiments made in various parts of the country. It is surprising at the first blush to note the different results obtained as reported. In the hands of one experimenter the paralysed immediately walk, the lame throw aside canes, and crutches, the deaf hear, and the blind see. The same experiments failed altogether in the practice of another. The slightest analysis of the procedures showed the occasion for such discrepancies. In the former cases the operation was performed in public, and the subjects of the experiments were informed of the expected results; in the latter cases patients were treated in hospital, in the ordinary way, and the effects were negative. Some curious results have, however, been obtained which might have been anticipated. Many patients have suffered from symptoms which have been attributed to blood-

poisoning, while some have been affected with neuralgias commencing at the seat of puncture, due probably to the wound of a nerve by the needle. Another feature of the experiments should be noticed. One experimenter discovered micrococci in every preparation, and he therefore advised sterilising the fluid before use. A somewhat noted medical writer thereupon ridiculed the suggestion, asserting that the value of the fluid depended upon the living spermatozoa which it contained, and sterilising the matter used would completely neutralise its inherent properties as a vital stimulant. One of the episodes of the controversy has been a wordy war of two prominent medical men, in the course of which an immense amount of scandal was made public. To the profession, the exhibition which these gentlemen made of their ability to use "Billingsgate" was humiliating, and their conduct met with universal reprobation.—*Lancet.*

DISHORNING ON ITS TRIAL.

The state of the law as regards dishorning is presently in a very unsatisfactory condition. Hitherto it has been held in the Scotch law courts that dishorning, however painful it might be, was a necessary and consequently a justifiable operation, and as such it could not be regarded as cruelty in the sense of the Prevention of Cruelty Act. Some eighteen months ago Mr. Wilson was brought up before the Sheriff of Fifeshire, on a charge precisely similar to the present, but the Sheriff ruled that he had done nothing but an operation which was quite customary and justifiable. The case was appealed to the High Court of Justiciary, where the judgment of the Sheriff was confirmed, and the operation of dishorning again declared to be perfectly justifiable. Since then, however, a farmer in Norfolk was convicted in the Court of Queen's Bench for cruelty through having dishorned a lot of aged bullocks close to the skull. The law of England was thus found to be at variance with the law of Scotland on the subject, and the Crown Counsel on this side the Border decided on having the question tried again, in view of this recent English decision, and also in view of the growing feeling of the public on the matter. It seems the very irony of fate, however, that Mr. Wilson should have again been selected as the subject of experiment, seeing that he had already run the gauntlet of the law courts on this question, and came out triumphant, though not without a heavy bill for expenses. Many other farmers and dealers were carrying on the same practice, and any of them could have been pounced upon, as well as the man who had fought and won on this question before. But be that as it may, Mr. Wilson has again been selected as the respondent, who will have a heavy bill to pay, whichever way the case may go.

Mr. Orr stated his objections to the relevancy of the libel in a long and able speech. This case, he urged, was precisely on all fours with the previous case, which had been decided in Mr. Wilson's favour in the High Court of Justiciary. In fact, Mr. Wilson had really and truly got from the High Court of Justiciary the fullest permission to perform this operation in the pursuit of his calling, and now, when he was making use of that permission, they had seized upon him again because some English judges had differed from the Scotch judges. It would certainly be very hard if Mr. Wilson, who had fought the matter out already in the highest court in the land, should be compelled to fight his battle over again, but he held that it had been conclusively settled in the highest court in Scotland that dishorning was a perfectly justifiable and legal operation, and that his Lordship was bound to abide by that decision, and to throw out this case on the ground of its irrelevancy. With regard to the recent English decision, he argued that there was a considerable difference between it and a recent Scotch case. For one thing, the Scotch Act aimed at putting down *wanton* cruelty, and it had to be proved that any operation, however painful, was done through wanton cruelty, before cruelty, in the sense of the Act, could be held proved. But in the English Act the word *wanton* was omitted, and therefore it was not necessary to prove wanton cruelty in order to secure a conviction. In the Norfolk case, too, it was not proved that the operation was at all common in Norfolk, in fact it was almost unheard of thereabouts, whereas, on account of the different class of cattle kept in Scotland, and the different system of feeding in the open courts, it was absolutely necessary to dishorn the cattle here, or they would gore each other, and in that way inflict more cruelty than could possibly be inflicted through dishorning. Besides, it would seem there had been some aggravating circumstances connected with this Norfolk case, for Lord Coleridge said, in his judgment, "I take the freedom to doubt whether if they (*i.e.* the judges in the Scotch case) had heard or read the evidence given before us they could possibly have arrived at any other conclusion than that at which my learned brother and I have arrived.' The learned counsel went on at considerable length to refer to castration, spaying, caponising, and other operations, which, though painful in themselves, had been decreed by the judges of the highest courts to be justifiable, and quoted numerous decisions to that effect. In conclusion, he urged his Lordship to hold the libel as irrelevant, and dismiss it accordingly.

The Sheriff then said he would not trouble Mr. Chisholm to reply. He had no business to anticipate what was going to be proved or what was not to be proved. What he had to consider was whether there was a relevant charge under the statute, and it appeared to him there was so. Whether the same facts were to be proven as in the former case against Mr. Wilson, he could not assume. It was possible there might be some other aggravations in this case which would show that the operation had been performed with wanton cruelty. When he had heard the proof he would then consider whether the judgment of the Court applied to the facts of the case.

Mr. Wilson then formally pleaded not guilty to the charge, and the proof was appointed to be heard

on 10th February. It is stated that twenty farmers and a large number of veterinary surgeons have been already cited as witnesses on the side of the Crown. *North British Agriculturist.*

THE CHLOROFORM COMMISSION.

It cannot be said that the latest exploit of the scientific physiologists is calculated to encourage public faith in the practice of vivisection. By careful experimentation and observation on innumerable animals in the licensed laboratories of Great Britain deductions in regard to the occasional fatalities happening with chloroform had been, it seemed, established. Our leading authorities were agreed that the action of chloroform on the heart was one of the principal dangers involved in its administration. During last year, however, news came from India that Surgeon-Major Laurie and certain medical colleagues had been experimenting at Hyderabad on pariah dogs, and had become convinced that chloroform had no action on the heart. The Nizam, eager for distinction in the scientific world, offered a fee of a thousand guineas, and expenses, to an eminent English physiologist, to be selected by the *Lancet*, for his opinion after demonstration on more animals at Hyderabad, Dr. Lauder Brunton was most properly chosen for the task, and his telegram to the *Lancet* last month shows with what thoroughness and candour he has carried out the investigation committed to him. "Four hundred and ninety dogs, horses, monkeys, goats, cats, and rabbits used . . . Numerous observations on every individual animal . . . Danger from chloroform is asphyxia or overdose. None whatever heart direct." It was at once pointed out by the *Lancet* that these results appear to indicate a complete reversal of the view held by Dr. Brunton when he left England. We shall soon be having fuller information concerning the enormous mass of experiments on living animals to which Dr. Brunton so concisely alludes; but we confess we fail to see what decent explanation the advocates of vivisection are going to make in regard to this colossal record of the valuelessness of their most trusted records.

Chemist and Druggist.

NOTES AND NEWS.

Midland Counties V.M.A.

The meetings of the Midland Counties Veterinary Medical Association will, until further notice, be held on the 2nd Fridays in February, May, August and November.

JNO. MALCOLM, *Hon. Sec.*

Vitality of Trichina.

M. PAUL GAUTIER has just communicated to the Paris Academy of Sciences some interesting particulars as to the vitality of the trichina. According to M. Gautier's experience, it is not sufficient, when refrigerating apparatus is used as a receptacle for fresh meat, to rely solely upon cold to kill the trichinæ which may be found in pork. Having had occasion to examine some fresh pork, much infested with trichinæ, which had come from abroad, he was struck by the fact that the trichinæ, which issued from their cysts by dissociation, were much more lively than those from salted meat when they were warmed. He submitted small fragments of muscles, for two hours, to a temperature oscillating between 20 and 25 drgs. centigrade below zero, and then made a microscopic examination. The trichinæ enclosed in these small fragments showed remarkable activity; their movements presented an activity quite characteristic which the trichinæ in salt meat examined originally did not possess before refrigeration. The trichinæ contained in hams salted with a mixture of sea salt and saltpetre did not resist the action of a temperature a few degrees only below zero maintained about an hour. Consequently a low temperature of 25 degs. centigrade below zero, maintained for two hours, would be insufficient to render fresh pork wholesome if it contained trichinæ. From this, it follows, say our French neighbours, that in the ports open to importation the supervision exercised over the fresh meat coming from refrigerating chambers must be redoubled in activity.

The Cause of Influenza.

We have been waiting for the statement that the Influenza outbreak was due to some disease of the lower animals. It has now arrived but we are disappointed in finding that the discovery was made in Paris, and not by our own Goverment Medical Department.

The following is from the *Daily News* Paris correspondent:—

The idea that the rinderpest is the cause of the epidemic gains ground, and that every sufferer has an attack more or less sharp of infectious pneumonia. The death of the greater number of the King of the Belgians' horses from so-called influenza supports this theory.

Honour to Professor Simonds.

We have seen with much pleasure the announcement that Professor Simonds, editor-in-chief of the *Veterinarian*, and for some years head of the Royal Veterinary College, has been appointed a justice of peace for the borough of Ryde, I.W.

The McGill University and Veterinary Science.

The official inauguration and installation of the Faculty of Comparative Medicine and Veterinary Science took place at the McGill University, Montreal, on December 5. The following gentlemen are appointed:—D. McEachran. F.R.C.V.S., professor of veterinary medicine and surgery and also dean of the faculty; Malcolm C. Baker, V.S., professor of veterinary anatomy; Charles McEachran, V.S., professor of Veterinary obstetrics and diseases of cattle. Associate professors:—Gilbert P. Gird-

wood, M.D. professor of chemistry; George Wilkins, M.D., professor of histology; D. P. Penhallow, B.Sc. professor of botany; James Stewart, M.D., professor of materia medica, and W. D. Johnston, M.D., demonstrator of pathology and curator of the museum.

Since 1866, when Professor McEachran first commenced his lectures on veterinary science, the growth of the school has been most rapid. In 1875 it was such as to necessitate the erection, by Mr. McEachran of a special establishment. It has also attained a high standing, both at home and abroad, and its graduates are now teachers in numerous veterinary colleges in Canada and the United States. It is a matter of congratulation that the McGill University has at length decided to promote and encourage this branch of medical science. The faculty have already advertised free treatment on two days a week for animals belonging to poor people.

Mysterious Horse Disease.

A mysterious illness has broken out in the stud of horses belonging to Mr. John Pears, The Mere, Lincoln, no fewer than thirteen having died. The horses first showed uneasiness by restlessly licking their lips; afterwards they experienced difficulty in breathing, but there were no signs of pain such as is usual in cases of poisoning by any irritant mineral poison. The breathing finally becomes stertorous, and ultimately the horses expire, apparently without any pain. Death in each case was occasioned by paralysis or loss of action both in the heart and the lungs, ending in pulmonary apoplexy. Post-mortem examinations of several of the horses have been made by Mr. Howse. In each case the stomachs have shown slight discolouration in places, but there was no excoriation or ulceration; but in every case the lungs were found to be very highly congested. The symptoms during life do not show the presence of any irritant mineral poison, but at present everything points to the existence of some vegetable poison, which is more difficult to detect, and has not at present been discovered. The intestines and the contents of the stomach are now in the hands of Dr. Harrison, the Lincoln city analyst, but he has not yet discovered any agent which could have worked such mischief, though his examination has not been completed. Professor Axe, of the Royal Veterinary College, is making an investigation into the cause of the malady.

Two further horses—a hunter and a valuable mare—have since died, making fifteen in all. The two last were stabled in a different building from that in which were the thirteen first attacked. The horses which Mr. Pears has bought to replace those lost continue to do well; they are watered and fed exactly as were the others, though every possible precaution is taken to prevent them getting anything of an injurious nature. The analysts who are investigating the case have not yet made their final reports.

There is now a suggestion that the disease may have resulted from aconite having got amongst the ensilage. The symptoms were not inconsistent with the horses having had aconite; but its detection has not yet been assured, for though Dr. Harrison in the course of his analysis, has found a vegetable alkaloid, his investigations do not yet enable him to say exactly what it may be. It is known that aconite grows wild in large quantities at Coleby and in the neighbourhood, and it is quite possible that roots of the herb may also be found in the crops grown by Mr. Pears, and used in making the ensilage. So that further progress of the analysis may possibly locate this as the injurious agent.

Fox-Hunting on the Cheviots.

According to time-honoured custom, the hill shepherds on the Scottish and English sides of the Border have just had their annual fox-hunt. Over thirty shepherds, accompanied by twice that number of collie dogs, took part in the sport in Henshole, and on the Bizzle. An unusual scarcity of foxes was experienced, only two having been run.

CORRESPONDENCE.

Communications for the Editor to be addressed 20 Fulham Road, S.W.

Original articles and reports should be written on one side only of the paper, and authenticated by the names and addresses of the writers, not necessarily for publication.

DISHORNING—A DISCLAIMER.

ROYAL VETERINARY COLLEGE, EDINBURGH.
January 4th, 1890.

SIR,

In your notes on "Dishorning Cattle" in your last issue, you make the statement that "Professor Walley considers every form of the operation cruel."

My letter on the subject to the "N. B. Agriculturist," to which you refer, does not bear any such interpretation, neither do I consider that every form of the operation is cruel. I do not object either to "tipping" in its various forms, or to the enucleation of the horn core—"buttoning"—in young calves.

Yours obediently,
THOMAS WALLEY.

CENTENARY OF THE R. V. COLLEGE.

SIR,

During a visit to the Royal Veterinary College to-day I casually caught sight of the following inscription on the coping stone of the wall within the College yard. "Founded 1791" and immediately arose the thought—Next year will be the Centenary of the College; upon which I asked the worthy Resident Professor if it was proposed to recognize the event, a suggestion he acquiesced in.

Surely the date upon which the hundredth anniversary of our College falls should be commemorated and right-well commemorated—whether in the form of a Grand International Conference followed by Banquet and Soirée, or in some other way that will bring well to the Public front the social claims and scientific position of a Profession now second to none.

With this brief, but none too early allusion to the approaching Centenary of the R.V.C., I leave the question for the digestion of the Profession at large.

Yours faithfully,
WOODROFFE HILL, F.R.C.V.S